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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,679	10/28/2003	Richard Louis Goin	2003-0168.02 (58521.US/46)	3920
21972	7590	08/23/2005	EXAMINER	
LEXMARK INTERNATIONAL, INC. INTELLECTUAL PROPERTY LAW DEPARTMENT 740 WEST NEW CIRCLE ROAD BLDG. 082-1 LEXINGTON, KY 40550-0999			STEPHENS, JUANITA DIONNE	
			ART UNIT	PAPER NUMBER
			2853	
DATE MAILED: 08/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,679

Applicant(s)

GOIN ET AL.

Examiner

Juanita D. Stephens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Election filed 6/13/2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) 10-16 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9, 17-23 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/6/2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 10-16 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 6/13/2005.

Applicant's election with traverse of Group I claims 1-9 and 16-23 in the reply filed on 6/13/2005 is acknowledged. The traversal is on the ground(s) that Applicant believes that the Examiner will undoubtedly have to search are related to a method for forming improved flow features in a nozzle plate and thick film layer for an ink jet printhead, thus will result in duplication of effort since the same classes and subclasses should be searched regardless of which claims are elected. Further, Applicant argues that the invention must be independent or distinct and there must be a serious burden on the Examiner. This is not found persuasive because it would be a burden on the Examiner to examine claims which have acquired a separate status in the art as shown by their different classifications and because of their recognized divergent subject matter, thus, these claims are best examined in the area for which the method claims are directed. Therefore, the Examiner feels that the requirement for restriction is proper under 37 C.F.R 1.1142.

The requirement is still deemed proper and is therefore made FINAL.

Specification

2. The disclosure is objected to because of the following informalities:

On page 5, line 5 the work "ink" is misspelled.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 8-9, 17-20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Murthy et al. (US 6,024,440).

Murthy et al. discloses an ink jet printhead (Fig. 4) for an ink jet printer, comprising 1) a semiconductor substrate (20) containing ink ejection devices (36), 2) a thick film layer (47) attached to the substrate, 3) a nozzle plate (18) attached to the thick film layer, the nozzle plate containing a plurality of ink ejection nozzles (34) corresponding to the ink ejection devices, and 4) the printhead containing flow feature (chamber 38 and channel 40) having a height dimension and a width dimension formed therein for flow on-ink to the plurality of ink ejection devices, wherein at least a portion of the flow feature dimensions for at least one of the nozzles is formed in both the thick film layer and laser ablated in the nozzle plate (col 4, lns 27-31), 5) wherein the thick film layer contained at least 12% of the flow feature dimension (as shown in Fig. 4), 6) wherein the flow features include an ink chamber and an ink flow channel in flow communication with the ink chamber (col 4, lns 27-31), 7) wherein the printhead comprises substantially all of the flow features formed in both the nozzle plate and the

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thick film layer (as shown in Fig. 4), 8) wherein the nozzle plate has a thickness ranging from about 25 to about 70 microns (col 3, Ins 7-11), 9) wherein the ink ejection nozzles have a bore length ranging from about 20 to about 65 microns (col 5, Ins 40-41), 10) wherein about 20% to about 80% of the flow features height dimension is formed in the nozzle plate (as shown in Fig. 4), 11) wherein the flow feature laser ablated in the nozzle plate have at least two different height dimensions (first dimension defined by nozzle length L and second height dimension defined by chamber and channel height) and 12) thick film layer having first portions on ink flow features formed therein and nozzle plate containing second portions of ink flow features formed by laser ablation (col 4, Ins 27-31).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6-7, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Murthy et al (US 6,024,440).

Murthy et al. teaches the claimed invention, with the specified exception of (1) wherein the thick film layer has a thickness ranging from about 5 to about 15 microns (recited in claims 6 and 21), and 2) wherein the flow features have a height dimension ranging from about 5 to about 30 microns (recited in claims 7 and 22). Murthy et al. at least teaches thick film layer having some particular thickness and flow features having

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some particular height dimension. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Murthy et al. with the specified thick film layer thickness ranging from about 5 to about 15 and flow features height dimension ranging from about 5 to about 30 microns, since it has been held that where the general condition of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Comments

7. Claim 16 should have been included with group II, therefore this claim has not been treated on the merits. Applicant should in next response cancel the nonelected claims 10-15 and 16.

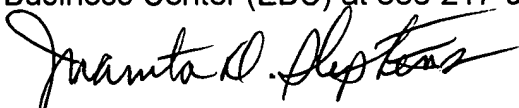
Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juanita D. Stephens whose telephone number is (571) 272-2153. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is (571) 272-8300

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JUANITA D. STEPHENS
PRIMARY EXAMINER

Juanita D. Stephens
Primary Examiner
Art Unit 2853

JS
August 22, 2005